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ABSTRACT

With increasing pressures being placed on early childhood teachers to provide academic programs, many are turning away from programs that foster pretend play. This study examined two contrasting approaches to teaching preschool children and considered their effects on children's linguistic and social abilities. One of the teaching approaches studied was the activity-based approach in which the teacher provides planned activities based on observations and perceptions of children's needs and interests. The second teaching approach was the event-based approach in which the teacher and the children together create the curriculum, with the teacher actively encouraging children to express their own ideas and to represent or re-create events and experiences, often in the context of pretend play. The research design involved an observation of randomly assigned children between 4- and 5-years-old in 2 preschool units within a middle-class suburban Brisbane preschool. The activity-based approach was implemented in one unit, and the event-based approach was implemented in the second unit. The comparative analysis of verbal interactions considered children's communicative abilities with both peers and adults and their social competence in terms of acquaintanceship and friendship as well as their ability to cooperate. The findings indicated that children in the event-based approach demonstrated significantly clearer communication and more cooperation, although differences in terms of social abilities relating to friendship were not significant. The findings also indicated that there are important links between pretend play, and the social interaction it engenders, and cognitive development. (Contains 25 references.) (WJC)

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COMMUNICATING AND COOPERATING IN PLAY

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ABSTRACT

The paper presents an examination of preschool children's verbal interactions during play in an indoor setting. This analysis is one aspect of a comparative research study which documented two contrasting approaches to teaching four to five year old children, and considered their effects on children's linguistic and social abilities. One of the teaching approaches studied was the activity based approach in which the teacher provides planned activities based on observations and perceptions of children's needs and interests. In the second teaching approach, the event based approach, the teacher and the children together create the curriculum with the teacher actively encouraging children to express their own ideas and to represent or recreate events and experiences often in the context of pretend play. The comparative analysis of verbal interactions considers children's communicative abilities with both peers and adults, their social competence both in terms of acquaintanceship and friendship as well as the children's ability to cooperate. The findings indicate that children in the event based approach demonstrated significantly clearer communication and more cooperation although differences in terms of social abilities relating to friendship were not significant. The paper considers possible reasons for these findings and explores their implications for teachers.

INTRODUCTION

These two extracts from children's conversations in a preschool setting were recorded as part of the study to be reported here, which examined children's verbal interactions as they played. They serve as a useful introduction because they focus attention on the nature of the communication of young children as they engage in social pretend play and highlight the importance of communication in assisting children to develop their social knowledge and abilities as they play.

Jenny and Scott, both four year olds, have been busy setting up the books in their library so other children can come and borrow books. They decide they need library cards like they have in their preschool library books but there is some discussion about how the cards should be made...

Jenny to Scott: How do you make them?
Scott to Jenny: Just draw a line... then cut along it and draw
Jenny to Scott: Yep! That's how you do it.
Scott to Jenny: Yeah. We draw all sorts of slashes on it, don't we?
Jenny to Scott: No we don't. (Jenny draws a straight line across the middle of the paper and cuts along it.)
Scott to Jenny: Hey! There's the library card. (They both continue making cards, putting them in a pile between them on the table. Scott looks over to the library and puts down his scissors..)
Scott to Jenny: **That's all we need don't we?** (Jenny looks at the pile) **That's all we think we need after you've cut that - that's all I think we need - don't we?**
Jenny to Scott: Yes. We have to put these scissors back. We have to put all these back Scott.

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Michael and Kerrin, both four year olds, are playing together in the meat factory. Kerrin is "weighing the bones" and Michael is putting them into a bucket. The building of the meat factory has been Kerrin's idea and he has done most of the constructing using blocks and large pieces of cardboard. He has even built a "conveyor belt." Michael, whose ideas about meat factories seem largely based on his experience of butchers' shops, however, is very keen to join in the play with Kerrin and to define their roles.

Michael to Kerrin: We're the butchers. We're the butchers aren't we?
Kerrin to Michael: **Ah yes..well.. we're both together, but you're the butcher and I'm the factory worker**
(Perry, 1988:264)

Although at first glance the verbal exchanges between Scott and Jenny and Michael and Kerrin appear simple, when they are analysed in more detail, the complex nature of the communication task becomes apparent. As Shields (1978) points out, at a minimum in such an exchange, the speaker must have an image of their interactor as

* having auditory perception
* possessing speaker/hearer competence in a shared code of signals
* having the ability to identify the source of the message
* being able to interpret the message with regard to its frame of reference
* being able to interpret the message with regard to intentions of the source
* being able to act or react to the message in some way corresponding to the tentative expectations of the speaker.

In the first example Scott, while considering the number of cards from his perspective, appears to be aware that Jenny may have another point of view, although he's obviously hoping for agreement. In the second example Kerrin is able, not only to interpret Michael's intentions but to react to the message in a way that will satisfy Michael's desire to be a butcher. At the same time Kerrin is able to meet his own desire to be a factory worker and not a butcher. At five years of age, in the context of a pretend game, Kerrin is able to avoid conflict and work out ways of tactfully dealing with his own desires and the desires of another.

The examples also illustrate how the children are drawing on their previous knowledge of their preschool library, factories and butchers' shops as they engage in pretend play. In sharing their knowledge (or scripts) as they play children are necessarily involved in negotiating roles, clarifying and extending their scripts and communicating their ideas (Nelson & Gruendel,1981; Shields, 1978; Mandler, 1983; Perry, 1988). Although the role of social pretend play in young children's learning has been the subject of much debate there is now a growing consensus in the literature that the development of young children's social competencies is linked with children's engagement in social pretend play (Garvey,1977; Vygotsky, 1976; Smilansky & Shefatya,1990; Connelly, Doyle & Reznick ,1984; Kessel and Goncu,1984; Forman,1992.). The findings of the study reported here support this view.

As part of a larger research project which documented and considered the effects of two contrasting teaching approaches (Perry,1988), a study was made of children's verbal interactions and their consequent social interactions during the 'free choice' period of these two differing preschool programs. In this paper, the background and aims of the larger study will be briefly outlined to provide the context for reporting the findings of the research which examined children's verbal and social interactions. Insights gained from this examination will be shared and the ways in which children's social competencies develop as they engage in social pretend play considered. Finally, implications of the study for teaching young children will be explored.

Background to the Study

In the early 1980s a number of Brisbane preschool teachers began to question their activity based approach to teaching. How meaningful or motivating was the threading to a pattern activity that Sue, the teacher, had provided for James? Even though Sue had planned this activity on the basis of her observations of James' poor eye-hand coordination, she couldn't help but notice his lack of enthusiasm for the task. His disinterest contrasted strongly with the small group of children who had decided to build a shop and were discussing with great enthusiasm the foodstuffs to be sold.

Reflecting on such incidents, the teachers came to the view that they wanted to offer children more opportunities for pretend play. They also wanted to encourage children to incorporate their own ideas for their games and activities into the program. As teachers began to involve themselves more in the children's pretend games following the children's leads, they were often amazed at the knowledge children had of events and situations. Teachers also found that within the *events* children had re-created, there were many opportunities for children to engage in meaningful activities to promote particular skills. This approach to teaching became known as the event based approach (Perry,1988;1995).

The appearance of the room in which an event based teaching approach was being implemented was very different from that in which an activity based approach occurred. Instead of being organized according to an adult's sense of order with clearly defined activity areas, children marked their play spaces with blocks or pieces of cardboard. Buildings were left up from day to day and children had access to a wide variety of recyclable materials. Given these notable differences parents and teachers began to ask questions about the event based program.

* Are the children really learning in this type of environment?
* Are the teachers really teaching if they play with children?

It was against this background that the aims of the large study (Perry,1988) were developed. These were:

(1) to identify the distinguishing features of both the activity based and event based approaches to teaching preschool children

(2) to establish the amount and quality of pretend play occuring in each unit

(3) to consider the effects of each teaching approach on the children's communicative and social abilities

(4) to examine the experiences of children within the preschool environment resulting from these two teaching approaches.

The study to be reported here relates to the third aim which considers the effects of both the activity based and the event based teaching approach on children's communicative and social abilities.

THE RESEARCH DESIGN AND FRAMEWORK

Research design: The research design involved a comparison of randomly assigned children aged between 4-5 years to two preschool units (N 30 in Unit 1 and 29 in Unit 2) within the one preschool centre, in an homogeneous middle class Brisbane suburb. The activity based approach was implemented in Unit 1 and the event based approach in Unit 2. Both the teachers were experienced and committed to their particular teaching approach. The investigation took place over an eight month period from January to August.

The research framework: The framework within which this study was set was a psychological one with a review of the literature being undertaken in order to establish whether or not there is a theoretical justification for an approach to teaching young children which emphasizes pretend play. This review involved consideration of the literature relating to representation,(Mandler, 1983); the acquisition of social knowledge, (Nelson &Gruendel, 1981; Bretherton,1984; O'Connell & Gerard, 1985); the development of communicative and social abilities (Shields,1978, Damon,1983) and pretend play (Fein, 1985).

In essence it was argued that when children engage in pretend play with others they are required to access scripts in which they have stored knowledge about a particular event or situation and to share these scripts with others. In sharing these scripts children clarify, extend and elaborate their scripts thereby increasing the complexity of their social knowledge as well as their ability to communicate and interact socially (Perry,1988).

In looking more specifically in the literature for ways in which social pretend play may enhance communication and social interaction, a number of processes were highlighted. For instance, the importance of role or perspective taking which requires that children consider perspectives other than their own and undertake social analyses and make inferences is emphasised. Instead of the concept of social perspective taking, however, Wertsch (1979,1985) and Rommetveit, (1985) taking a Vygotskyan approach, use the concept of intersubjectivity. They argue that although social perspective taking and intersubjectivity are similar notions, intersubjectivity is an interpsychological process because it is socially mediated and regulated. Perspective taking on the other hand is seen to be intrapsychological because it is a conscious, self regulated process. Wertsch (1985:161) maintains that

> "when interlocutors enter into a communicative context, they may have different perspectives or only a vague interpretation of what is taken for granted and what the utterances are intended to convey. Through semiotically mediated "negotiation", however, they create a temporarily shared social world, a state of intersubjectivity"

Shields (1978) proposes a model which seeks to explain how this state of intersubjectivity is established. This model proposes that interactors need to share a common frame of reference which is made up of two aspects:

* the latent aspect - the referential or ideational element (Halliday,1978) and
* the immediate aspect which involves each interactor's perceptions of what each is doing at the time of utterance, as well as an interpretation of the immediate environmental setting.

Shields (1978) suggests that this immediate frame of reference contains both the direct reflection of what is going on in the mind of each participant and inferences about how these events are reflected in the minds of others. The double focus is seen to be made possible by the construction of a system of rules or set of roles based on previous experiences and interpersonal interactions. This "set" talked about by Shields is similar to the notion of scripts proposed by Nelson & Gruendel (1981). Shields argues that in a pretend game of Mums and Dads, the roles in the "set" are even more distinct than the roles played in real life although they take time to learn. Such games begin at an early age and become more elaborate with time. In the light of Nelson and Gruendel's (1981) theory it can be argued that this heightened awareness and increasing elaboration is due to the accessing of the particular role concept inherent in the script as well as the sharing and extending of scripts which are necessary in pretending (Nelson and Seidman, 1984).

A review of numerous play theories also highlighted a number of aspects inherent in pretend play which appear likely to facilitate the communicative/interactive process. For instance, Bateson's (1956) notion of reframing or sending the message to others that "this is play" such

as when children say "hey let's pretend..." can be seen as important in developing an understanding of metacommunication. Piaget's (1962) view that in play there is a gradual reconciling of ludic assimilation with the demands of social reciprocity reinforces the notion that discussion, problem solving and cooperation may be necessary in order to find a sufficient match between each player's script or frame of reference for play to proceed. Similarly, Vygotsky's(1976) proposal that the desire to maintain the symbolic nature of the play episode and to agree on the substitution of objects or the allocation of roles, suggests that play provides the motivation for players to negotiate and communicate within the play frame. As well, Vygotsky's view that in play there is an adherence to roles and rules in keeping with the script, suggests that a play partner's behaviour becomes more predictable because it is in keeping with these roles and rules. As a result, inferences about the other's behaviour are more likely to be correct.

Some hypotheses:: From the literature, then, it was argued that there are many aspects inherent in social pretend play which are likely to promote social and communicative abilities. A number of hypotheses were proposed.
These were that a high frequency of engagement in social pretend play correlates with

* increased communication with peers and adults
* enhanced communicative ability in terms of the clarity of communication
* enhanced social competence in terms of social comparison relating to acqaintanceship and friendship within the preschool setting
* enhanced social competence relating to cooperation within the preschool setting

AN EXAMINATION OF CHILDREN'S VERBAL INTERACTIONS

In order to examine these hypotheses a description of each child's communicative behaviour which included the frequency of utterances to peers and adults as well as the modes or contexts in which the utterances were made was needed.

The sample: The sample was a sub-sample of the larger sample and consisted of 24 children,4-5 years of age, selected randomly, subject to there being 12 from each Unit with six being from the morning session and six from the afternoon session and with equal numbers of girls and boys. On the results of the pre-treatment measures relating to vocabulary and auditory comprehension administered at the beginning of the year there was no significant difference between these two groups of children.

The method: Following a pilot study it was decided that a 10 minute observation would be made of each of the six children in a morning and an afternoon session during the free choice period of the program on three occasions one week apart (ie 30 minutes of observation for each of the 12 children). Because it was anticipated that interactions could be affected by the time in the free choice period at which the observation was made, children were observed in a different but systematic order on the three occasions. The observer recorded the verbal interactions of the target child directly on to audio tape or when necessary repeated verbal interactions verbatim on to the tape. Descriptions of children's actions and nonverbal communications as well as settings and contexts were also recorded. Teachers were not informed as to the identity of the target children until the observations were completed so that their behaviour towards them was not influenced in any way.

The coding: A variety of units have been used in the analyses of speech. These include the utterance, which is any speech separated by pauses and the sentence. The thought unit, an alternative suggested by Gottman and Parkhurst(1980), was used in this study because it is data reducing, makes it possible to code as a function of context, and, as well, makes possible the coding of sequences. It is data reducing in the sense that a series of utterances can be considered as one code as in the following example: *"First you put this on (pause) then you snap this on (pause) and then you fasten the clip."* The importance of being able to consider

the function of an utterance within a context is highlighted in the example of a child saying *"here's mine (pause) here's yours"*. If the code unit was an utterance separated by pauses the example would have been coded as two separate units. With the thought unit being used, it is coded as as one thought unit involving sharing.

The fact that the thought unit also makes possible the consideration of sequences is also an advantage. For instance, if one child says "I'm colouring mine blue" and another child says "I'm colouring mine red," using the coding system outlined in Appendix 1 each of these units would be coded as ME units because the speaker is referring to his or her own activity and both would be regarded as occurring in the activity talk (AT) mode. If these units are then examined in terms of the sequence(ie ME-ME) it would be interpreted as a comparison sequence. Thus the function of the code is derived from the sequence that is apparent and is not a judgment made during the coding process itself.

Intercoder reliability: Three training sessions were held with the two coders to acquaint them with the coding system prior to establishing inter-coder reliability.

Categories for establishing modes of thought units: Three broad coding categories, activity based talk (AT), pretend play (PP) and conversation (CN) were used to establish the modes or contexts in which thought units were made. These were decided upon after the pilot study because they provided a useful overview of contexts.

Categories for establishing the extent of connectedness: Given the theoretical argument that "the exchange of meaning through speech is dependent on the sharing of an intersubjective field" (Shields 1978:537), the connectedness or lack of connectedness in children's speech appears important. Two coding categories suggested by Gottman and Parkhurst (1980), the collective monologue(CM) and the nonresponse (NR) code were used for this purpose.(Refer Appendix 1)

Categories for the content of peer interactions: Although it was anticipated that the description of peer verbal interactions based on the coding categories outlined above would give some general descriptive data and indicate any differences between the two units, it was envisaged that a more detailed analysis of content would focus on specific communicative and social processes and abilities in the children's spontaneous verbal interactions. Numerous content codes adapted from Gottman and Parkhurst (1980) were used for this purpose. They are outlined in Appendix 1.

A description of communicative behaviour

An analysis of thought units: As can be seen from Table 1 the mean frequency of thought utterances made by children to peers in Unit 2 (the event based unit), is significantly greater (t value =3.49, $p < .005$) than the mean frequency of thought utterances to peers made in Unit 1 (the activity based unit). The number of thought units expressed by children to adults (ie the teacher and aide) in Unit 2, however, is not significantly different from the number expressed in Unit 1 although the mean frequency in Unit 2 (17.50) is higher than in Unit 1(9.92). When the number of thought units expressed to both peers and adults are combined, the difference between the two Units is significant (t value = 4.16, $p<.0005$) with communication occurring far more frequently in Unit 2 than in Unit 1 as hypothesized.

Although the mean frequencies of thought units expressed by target children to themselves were relatively few, significantly more of these types of utterances were made in Unit 1 than in Unit 2 with the value of t being $.025>p>01$. Given that this type of thought unit was coded whenever speech was unconnected or when children were not responding to one another, this result would seem to be consistent with previous findings concerning the significantly lower frequency of verbal communication in Unit 1.

Given the reponsive nature of communication it was considered that the number of thought units expressed by children to adults could be influenced by the number of thought units expressed by adults to children. When the thought units expressed by the teacher and the aide to children were combined, however, there was no significant difference between the two units with the level of significance t being well well below the .05 level (t value = 0.77,.25>p>.10). These results suggest that although the teaching approaches differ there are similar amounts of verbal interaction between adults and children.

Table 1

The means, standard deviations, t values for differences with their levels of significance, of thought units (TUs) expressed by the sample to peers, adults and themselves, by Units.

Description of variable	Unit 1 (N=12) Mean	S.D.	Unit 2 (N=12) Mean	S.D.	t	Probability (one tail test)
No of TUs of child with peers	31.92	20.87	59.42	15.74	3.49	p< .005
No of TUs of child with adults	9.92	8.67	17.50	13.53	1.56	.10>p>.05
No of TUs of child with peers and adults	41.83	22.65	76.92	16.38	4.16	p<.0005
No of TUs of child expressed to self	4.17	3.24	1.75	1.86	2.14	.025>p>01

The modes of utterances: The graph presented in Figure 1 shows the modes or contexts in which the thought units to peers were expressed. In Unit 1 (the activity based unit) more than three times as many thought units were expressed in the activity talk mode as in the pretend play mode while there were very few thought units about past events or things not present expressed in the conversation mode. In contrast, in Unit 2 (the event based unit) when interacting with peers nearly four times as many thought units were expressed in the pretend play mode as in the activity talk mode, with extremely few thought units being expressed in the conversation mode. A similar pattern was evident when communication with adults was examined with most of the thought units expressed by children to adults in the activity mode in Unit 1 and in pretend play mode in Unit 2. These findings are consistent with another finding of the study not discussed in this paper that significantly more pretend play occurs in Unit 2 than in Unit 1 and highlight the apparent ease with which children are able to communicate with each other in pretend play.

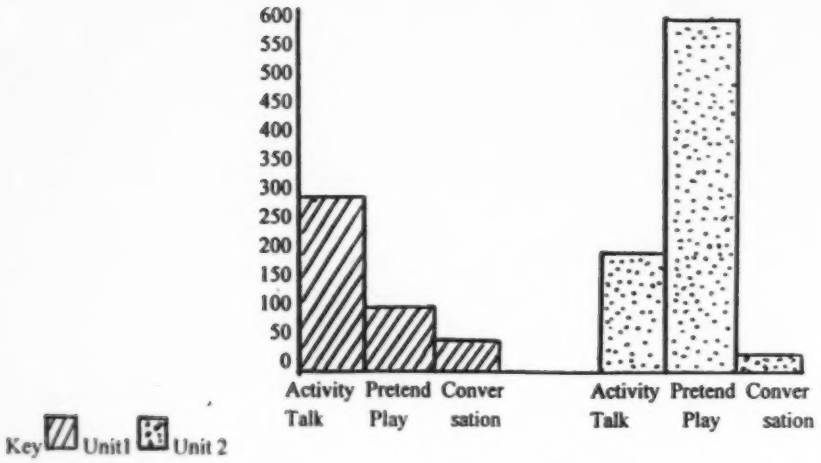

Figure 1

Graph showing number of thought units expressed to peers in the activity talk(AT), pretend play (PP) and conversation(CN) modes.

Because of the multi-dimensional nature of social competence (Damon,1983) it was decided to examine aspects of the children's verbal interactions most likely to indicate abilities in social competence. These aspects were clarity of communication, the nature and extent of social comparison and the nature and extent of cooperation.

Communication clarity: Although communication clarity in children has been a difficult aspect to research because it is difficult to determine from observation what a speaker is intending to communicate, Gottman and Parkhurst (1980) argue that failure to communicate clearly or to maintain discourse is indicated by the extent to which sequences can be detected between a request for clarification by one child and a failure to clarify by another. Alternatively it can be argued that sequences in which requests for clarification or information are met are indicative of communication clarity.

The results of this analysis showed that although the frequencies were low there was a similar number of instances, indicating a lack of communication clarity in both units with 13 instances in Unit 1 and 11 instances in Unit 2. In terms of sequences in which responses were made however, there were 35 instances recorded in Unit 2 and 15 instances in Unit 1. There was also a significant difference in favour of Unit 2 in terms of the number of spontaneous clarifications preceding the utterances ($t = 4.59, p<.005$)

When the transcripts were examined for reasons to account for these findings it appeared that the nature of the activity itself and the level of children's interest and involvment were likely influential factors. For instance, in Unit 1 where the emphasis was on the activity in the here and now, there appeared to be little stimulus for responding to questions in any detail or for making spontaneous clarifications.This is illustrated in these examples from Unit 1

Mark and Davis are both at the puzzle table doing puzzles
D. to M. Where does this piece go?
M. to D. Over there.

Dan and Jacob are building a large block construction
J. to D. Where does this block go?
D. to J. In here. (He points to a space)

In contrast, in the next example typical of those in Unit 2, the imaginary context shared by the interactors provides a common frame of reference which seems to stimulate, not only actions but questions and clarifications about those actions.

Andrew has been working his "cement flattener" and, with the teacher, he and Nicholas have been discussing the need for wooden casing around the "cement." Andrew has maintained that the one piece he has is sufficient. Nicholas doesn't agree and brings over some long wooden blocks.

N. to A. I've got some sawn wood
A. to N. For what?
N. to A. For this.
A. to N. But its already got some wood
N. to A. I know...but the sawn wood is to put down on the cement.

Although these results do not provide clear evidence of enhanced communicative abilities in terms of communication clarity, they do suggest that an approach to teaching which emphasises pretend play, results in more frequent demonstration of, and therefore the practice of, skills and abilities necessary in clarifying communications than does the activity based approach. Whether this greater frequency is indicative of enhanced ability or results from more opportunities for communication is an issue requiring further examination.

Social comparison: The study of the social comparison aspects of children's verbal interactions was undertaken because Gottman and Parkhurst (1980) had shown that it was an important process in developing acquaintanceship and friendship which are important to a child's sense of social competence. Gottman and Parkhurst argue that, as they converse, children learn that they are similar and that it is important to first establish common ground before defining differences and ' separate' territory which suggest some kind of filter of similarity-dissimilarity. On this basis sequences indicative of forms of social comparison are seen to be indicative of the extent to which acquaintanceships and friendships are being developed. The sequences used were:

ME - YM (building common ground/solidarity)
eg Chr to U: I watch the Knock Out show on TV.
D to Chr: I do too.

ME - ME (contrast/expression of difference)
eg Discussing the pictures on their lockers
A. to St: Mine's got a hat.
St. to A: I've got a horse on mine.

QFE - FE (exploration of opinion or feeling)
eg Referring to the boxes P has brought from the shop
K. to P: Do you want to stamp them?
P. to K: No. I don't want to.

FE - FE (expression of opinion)
eg Discussing each others' painting
T to Ch: I like yours.
Ch to T: And I like yours.

ME - FE (expression of own opinion in regard to another's action)
eg At the dough table making biscuits
S. to A: I've made another one.
A. to S: I don't like that one.

Following an analysis of the data no significant difference between Units in the frequency of social comparison sequences was found with $t = .077 (.10 < p < .25)$

It was interesting to note that the frequencies of sequencies were different from what was anticipated on the basis of the findings of the pilot study made two months earlier. In the pilot study the most frequently occurring sequence was ME - YM, the sequence seen to build common ground and solidarity. Two months later however, the most frequently occurring sequence in both units was ME - ME, the sequence seen as expressing difference and contrast. The second most frequently occurring sequence in the later study in both Units was ME - FE. This sequence which was seen as an expression of one's own opinion in regard to another's action, could also be regarded as an expression of difference. Interestingly there was only one instance of this sequence in the pilot study. These results would seem to suggest that once children have established common ground they are then more comfortable and able to cope with expressions of contrast and difference.

Although these results can only be regarded as tentative due to the smallness of the sample, given the non-significant difference between Units in terms of the overall frequency of social comparison sequences, both approaches to teaching appear to provide opportunities for developing friendships.

Extent of cooperation: The ability to cooperate with and get along with others is generally regarded as an important aspect of social competence with the ability to use linguistic forms that influence others in conversation being seen as one of the most basic elements. Shields (1978) points out that devices to set up a mutual field of attention such as summons and address, devices to maintain reciprocity such as turn taking, and acknowledgements such as yes and no have all been highlighted as means whereby the relationship between the speaker and hearer is set up and maintained. Similarly, the use of modal expressions (shall/will/can) develops as children come to realize the voluntary nature of human activity and the need to consider the status and views of others as they negotiate interpersonal activity.

In this study, while the noting of the use of these forms of discourse was considered important, the effectiveness or consequences of their use needed to be considered if children's abilities to seek and gain cooperation was to be assessed. Using the sequential analysis suggested by Gottman and Parklhurst (1980) the following alternative forms were examined.

* imperatives or demands (DE eg Give me that.)
* expressions of needs,wants and feelings (FE eg I need that.)
* an expression of a plan that involves the speaker and another (YM eg Let's build our house now.)
* a polite suggestion (QFE eg Do you want to build a house?)
* a question for agreement (QAG eg The baby is going to sleep,OK?)

The effectiveness of each form was assessed by the extent to which each form gained cooperation. This was marked by the agreement code AG. Similarly, the extent to which cooperation was sought but not achieved was marked by NR,the non response code.

The results showed that significantly more cooperative sequences occurred in Unit 2 (the event based unit) than in Unit 1 (the activity based unit) with $t = 7.90$, $p < .005$. There were also significantly more non-cooperative sequences occurring in Unit 1 than in Unit 2 ($t = 5.52$, $p < .005$).Thus the hypothesis that a high frequency of engagement in social pretendplay correlates with enhanced cooperation within the preschool setting is supported.

An examination of the data suggested that the mode or context in which the communication occurred was an important factor with far more instances occurring within the pretend play mode. In Unit 2, for example, 78 of the 91 cooperative instances occurred in the pretend play

mode. In Unit 1 there were only 19 cooperative sequences and all but 2 of these occurred within the activity talk mode. In the light of the theory outlined earlier it is suggested that because pretend play scripts help in the creation and maintenance of a shared frame of reference, children are aware of common goals such as building a house or caring for sick babies. This in turn results in greater cooperation because there is a shared sense of purpose.

The most frequently occurring sequence in Unit 2 was QAG--AG, a question seeking agreement,which implied that the user recognized the voluntary nature of the other's behaviour. Some of the simpler examples included:

I can go now, can't I?
Yeah.

This can be the Farax,OK? (holding up a plastic jar as she nursed the doll)
OK.

There were also a few examples of children agreeing in a diplomatic way, as in Kerrin's response given at the beginning of this paper, as well as examples of agreeing but not necessarily in a compliant way. For instance, after Scott, James and Kerrin had played in their house for sometime Scott pronounced that "Kerrin and me are angry 'cos we got swords." James immediately sought some agreement that they were all still playing together.

J to S: But you're still in our home aren't you?
S to J: Yeah. But Kerrin and me have got swords!

Spontaneous clarifications or reasons for the request for agreement were also evident in a number of sequences in Unit 2. For example:

C to Ch: Can you give this baby a cracker biscuit 'cos she's got a sore hand?
Ch to C: OK. Here baby. (Ch pretends to feed the doll.)

Again the shared play frame appeared to facilitate the clarification as well as the resulting cooperation because of the shared sense of purpose.

Lack of a shared sense of purpose was evident when examining the DE codes in Unit 1 in which the speaker demanded attention or a response (eg "Look at mine!") or told others what to do ("You're not allowed to peek!"). In Unit 1 these sequences which occurred in the activity mode, were frequently not met because there was little sense of shared purpose. In contrast, in Unit 2, although children told each other what to do as they were building their hospital (eg "Hey get some more wall paper for that wall" and "Put another nail in here") the reasons for the request were apparent. The shared sense of purpose seemed to foster the cooperation and the interest and motivation for the task assured the speaker of the other's response. The fact that such requests were met with cooperation no doubt reinforced confidence in the social relationship.

This confidence that cooperation would be achieved could possibly account for another interesting feature which emerged from the analysis of the data from Unit 2. This feature was the relatively high frequency of an utterance in which the speaker outlined the way in which cooperation could be or was being achieved or in which perceived differences could be equalized. The emphasis appeared to be on the equal sharing of the action.
For example:

James and Scott are trying to move a large box with two string handles
J to S: You pull that one. I'll pull this one.

Michael and Tim are shark fishermen cutting up their sharks
M to T: I'll just cut the tail off and the head, and you can cut the rest of the meat out.

Kerrin and Michael in the meat factory distributing "bones"
K to M: Some can go in your bucket and some can go in mine.

Although no verbal agreement was given to these statements, resultant action indicated cooperation. Significantly more of these cooperation statements were made in Unit 2 than in Unit 1 ($t = 4.06$, $p<.005$). As well as the assumption of cooperation underlying these statements there also appeared to be a concern for fairness and equality both in relation to the sharing of the tasks as well as in the sharing of materials as demonstrated in the following example as Carrie and Cherie sorted through the shreds of cardboard for their pizza topping

C to Ch: They've got stacks and we haven't got hardly any.
(C distributes the pieces more equally.)
Ch to C: They can have lots and we can have lots.

IMPLICATIONS OF THE EXAMINATION

This examination of verbal interactions by children within the two preschool Units provides a number of clues as to why much clearer communication and cooperation occurred within Unit 2, the event based play unit than in Unit 1, the activity based unit. These are that :

* the nature of social pretend play with its shared scripts and the shared understanding of the tasks needed to extend and elaborate the scripts, provides many opportunities for seeking and giving cooperation

* because in social pretend play the frame of reference is shared, the basis for the request is more easily understood by the listener. The script also provides the requestor with a basis for making clarifications or offering reasons for the request

* because children are intrinsically motivated to engage in social pretend play and want the play to proceed the liklihood of a non- cooperative response is lessened

* the play script generally provides the responder with alternative options so that while appearing to agree and cooperate with the other, the child's own ideas can also be expressed and carried through in a cooperative atmosphere

* having achieved cooperation both as a giver and a requestor, the reinforcing nature of success strengthens the child's confidence that cooperation is possible and can be achieved using particular strategies.

With increasing pressures being placed on early childhood teachers to provide more academic type programs, many are feeling confused and turning away from programs which foster pretend play. The findings from this study serve as a timely reminder that there are important links between pretend play and the social interaction it engenders and cognitive development . The development of cooperation, for instance is " a specialized form of reasoning acquired only in specific social contexts, and .. has substantial implications for a person's general adaptation in life" (Davidson,1992:25). Although this paper has focused mainly on communications between children, the insights gained suggest that adults could learn a lot about fostering adult /child communication and cooperation by considering some of the factors which appear to promote positive social interaction between children. It is hoped that the concluding questions will be considered further and provide a basis for the development of more effective communication and social interaction between adults and children.

Some questions to ponder.

* How can adults find out what children are thinking or understanding as adults and children talk together?
* How do adults establish shared frames of reference (intersubjectivity) as they talk with children?
* If cooperation is the goal, how important is it for children and adults to understand and share the common purpose? How can this understanding and sharing be achieved?
* When seeking to achieve cooperation is there always a recognition of both the adult's and child's choices or options?
* How important is a preparedness to negotiate by both adult and child when seeking cooperation?
* Is sufficient recognition given by teachers to the powerful reinforcer inherent in a child's achievment of cooperation with both children and adults?

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Appendix 1

Codes for highlighting lack of connectedness from Gottman and Parkhurst (1980)

* **Collective monologue** (CM): A collective monologue is an unbroken stretch during which the children are talking about different things, and during which statements are neither responses to previous statements by the other, nor are they responded to. A CM block may be only one thought utterance.

* **Non-response** (NR): A non-response is coded when the speaker's plea,question, comment or demand receives no acknowledgement, response or actions from the hearer(s). Note that visual attendance to the speaker or the object of the utterance is regarded as a form of acknowledgement and is therefore not included in this code.

Content codes adapted from Gottman and Parkhurst (1980)

* DE: **Demand** is coded whenever the speaker demands attention or response (eg "look at me") or tells others what to do.
* ME: **Me** is coded whenever the speaker is talking about themselves,referring to the speaker's activities,plans accomplishments,attributes possessions or abilities (eg " I'm making mine orange.")
* FE: **Feelings** is coded for statments that have to do with the speaker's wants,feelings opinions,likes, dislikes, and needs (eg "I want to play house". "I have to close this.")
* IF: **Infer** is coded for an attribution of feeling,opinion, problem or consequence that has come out of the situation; in other words the attribution is a reasonable inference for the circumstances (eg one child pretend to eat icecream and says "Ah!" and the other child says "That's good isn't it?" This last statement would be coded IF.)
* SY: **Sympathy** and comfort is coded when thereis an attempt to console,protect,defend or ease distress (eg "Don't worry.We"ll be back soon.")
* OF: **Offers** is coded when help, thoughtfulness or generosity is offered or a helpful suggestion is made. (eg "Here,I'll fix it." or "I made this for you.")
* AH: **Asks help** is coded when a speaker requests help or assistance or asks for materials (eg "Will you tie my shoes?")
* YM: **You and me** is coded when the speaker is working for closeness or unity between himself and the other child by emphasizing cooperation, common interest, common experience, concerted action or shared experiences from which others are shut out (eg "Let's play pirates" or "I'm five too.")
* YM*: **You Me*** is coded when the speaker is outlining the way in which cooperation can be or is being achieved, or perceived differences equalized. The emphasis is on an equal sharing of the action (eg "You pull that,I'll pull this one")
* RU: **Rule** is coded when a rule or principle with general usefulness for behaving is invoked or created (eg "We can take turns.")
* IN: **Information exchange** is coded whenever simple information is asked for or given (eg "My Mum's getting a new baby sitter.")
* IN*: **Information*** is coded if the speaker narrates or describes his own and or another's activity. (eg Now we're going to build a house" or describes materials, processes or products which gives information about an activity or a situation (eg "We'll use this cardboard for the walls.")
* ID: **Ideas** is coded for statements and information relating to a role or event script (eg

"When it's dark us pirates are going to look at peoples houses.")

* CM: **Clarifies message** is coded if the speaker clarifies a statement,restates it with some alteration, or gives an explanation or reason (eg "The one up there. The gray one with red on it") The last statement would be coded CM.)
* NCM: **Failure to clarify message** is coded when the speaker fails to adjust a message in response to the other's confusion (eg In the sequence "Where's your dumb straw?" "What's a dumb straw?" "Your dumb straw" the last statement would be coded NCM)
* AG: **Agreement** is coded for statements having to do with agreement, compliance or pleasure with the other, what s/he does, has or wants. (eg "Yeah,that's right.")
* DG: **Disagreement** is coded for noncooperation,refusal or denial, disapproval directed toward the other child, the other's statements, possession or behavious (eg "I am not!")